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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

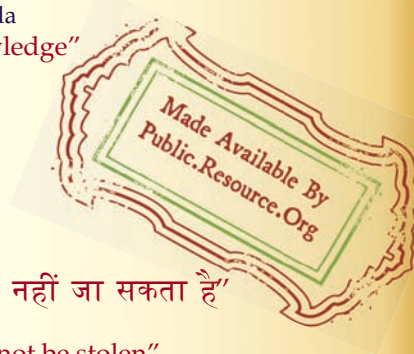
IS 15088 (2001): Lemon Juice Preserved Exclusively by Physical Means [FAD 10: Processed Fruits and Vegetable Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
पूरी तरह भौतिक तरीकों द्वारा संरक्षित
नींबू का रस — विशिष्टि

Indian Standard

LEMON JUICE PRESERVED EXCLUSIVELY BY
PHYSICAL MEANS — SPECIFICATION

ICS 67.080.10

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Processed Fruits and Vegetable Products Sectional Committee had been approved by the Food and Agriculture Division Council.

Lemon juice is an important citrus fruit juice manufactured in the country. It also has an export potential. To ensure the quality of the Lemon juice, it is essential to have strict quality control based on specifications. This Indian Standard, which is based on Codex Standard 47-1981 Codex Standard for Lemon juice preserved exclusively by physical means, has been formulated to provide the necessary guidelines to manufacturers and consumers for maintaining quality control.

A scheme for labelling environment friendly products to be known as ECO Mark has been introduced at the instance of the Ministry of Environment and Forests (MEF), Government of India. The ECO Mark shall be administered by the Bureau of Indian Standards (BIS) under the *BIS Act*, 1986 as per the Resolution No. 71 dated 20 February 1991 and Resolution No. 425 dated 28 October 1992 published in the Gazette of the Government of India. For a product to be eligible for marking with the ECO Logo it shall also carry the Standard Mark of BIS for quality besides meeting additional environment friendly requirements. The environment friendly requirements for Lemon juice have also been included which are based on the Gazette Notification No. 624(E) dated 6 September 1995 for Labelling Beverages, Infant Foods, Processed Fruits and Vegetables as environment friendly products, published in the Gazette by the Government of India.

In the preparation of this standard, due consideration has been given to the provisions of the *Standards of Weights and Measures (Packaged Commodities) Rules*, 1977, *Prevention of Food Adulteration Act*, 1955; and *Fruit Products Order*, 1955 and the Rules framed thereunder. However, the standard is subject to the restriction imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960. 'Rules for rounding of numerical values (*revised*)'. The number of significant places retained in the rounded off value, should be the same as that of the specified value in this standard.

Indian Standard

LEMON JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and method of sampling and tests for Lemon juice.

2 REFERENCES

The following Indian Standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	Title
1797 : 1985	Method of test for spices and condiments (<i>second revision</i>)
2491 : 1998	Food hygiene—General principles—Code of practice (<i>second revision</i>)
2860 : 1964	Methods of sampling and test for processed fruits and vegetables
3881 : 1993	Tomato juice (<i>first revision</i>)
5403 : 1999	Method of yeast and mould count of food stuffs and animal feeds
5887 (Part 5) : 1976	Methods for detection of bacteria responsible for food poisoning: Part 5 Isolation, identification and enumeration of <i>VIBRIO CHOLERA</i> E and <i>VIBRO PARAHAEMOLYTICUS</i>
6542 : 1972	Code for hygienic conditions for fruit and vegetable canning units
9396	Round open top sanitary cans for foods and drinks:
(Part 1) : 1987	Tin plate requirements (<i>first revision</i>)
(Part 2) : 1987	Sizes and general requirements (<i>first revision</i>)
11984 : 1986	Glass bottle for free flowing liquids
13815 : 1993/	Fruit and vegetable products —
ISO 2173 :	Determination of soluble solids content—Refractometric method
13844 : 1993/	Fruit and vegetable products —
ISO 750 :	Determination of titratable acidity
1981	
15096 /	Fruit and vegetable products —
ISO2448 :	Determination of ethanol content
1998	

3 GENERAL

Lemon juice (unfermented but fermentable), intended for direct consumption, shall be obtained by a mechanical process, from the endocarp of sound, ripe lemons (*citrus limon* Burm. f.) preserved exclusively by physical means.

4 REQUIREMENTS

4.1 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of Lemon juice. Natural volatile Lemon juice components may be restored to any Lemon juice from which natural volatile Lemon juice components have been removed.

4.2 Ingredients

The addition of concentrate to Lemon juice is permitted. Only concentrate from Lemon (*citrus limon* Burm. f.) may be used. The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

4.3 The product shall also conform to the requirements given in Table 1.

Table 1 Requirements for Lemon Juice
(Clause 4.3)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Soluble Lemon solids, % m/m, O Brix, Min	6	IS 13815
ii)	Total titratable acidity (as anhydrous citric acid) m/m, Min	4.0	IS 13844
iii)	Ethanol content, g/kg	3	IS 15096
iv)	Essential oils, ml/kg, Max	0.5	15 of IS 1797
v)	Metallic contaminants:		
a)	Arsenic, mg/kg, Max	0.2	13 of IS 2860
b)	Lead, mg/kg, Max	1.0	14 of IS 2860
c)	Copper, mg/kg, Max	5.0	15 of IS 2860
d)	Zinc, mg/kg, Max	5.0	16 of IS 2860
e)	Iron, mg/kg, Max	15.0	Annex B of IS 7732
f)	Tin, mg/kg, Max	250.0	17 of IS 2860

NOTE — Sum of copper, zinc and iron shall not exceed 20.0 mg/kg.

4.3 Microbiological Requirements

4.3.1 When tested in accordance with 18 of IS 2860, the product shall:

- a) be free from micro-organisms capable of development under normal conditions of storage, and
- b) not contain any substance originating from micro-organisms in amounts which may represent a hazard to health.

4.4 The pesticide residues, if any in the product shall not exceed the limit as prescribed in *PFA Act, 1954* and the Rules made thereunder.

4.5 Minimum Fill

The container shall be well filled with Lemon juice and the product shall occupy not less than 90 percent of the water capacity of the container when tested by the method prescribed in Annex G of IS 3881.

5 HYGIENE AND HANDLING PRACTICE

The material shall be prepared and handled under hygienic conditions as given in IS 6542 and appropriate clauses of IS 2491.

6 ADDITIONAL REQUIREMENTS FOR ECO MARK

The product which bears the ECO Logo shall also conform to the additional requirements given in Annex A.

7 SAMPLING

Unless otherwise agreed to between the purchaser and the supplier sampling for lot acceptance shall be done in accordance with 3 of IS 2860.

8 PACKING, MARKING AND STORAGE

8.1 Packing

The product shall be packed either in hermetically sealed open top sanitary cans made from tin plate and inside lacquered (*see* IS 9396) or in food grade plastic containers or glass bottles (*see* IS 11984) or flexible packs or aseptic packages.

8.2 Marking

8.2.1 Each container shall be marked with the following particulars:

- a) Name of the product;
- b) Brand name, if any;
- c) Name and address of manufacturer;
- d) Batch or Code number;
- e) Net content in ml;
- f) List of ingredients in descending order of proportion (*see* Note);
- g) Month and year of manufacture;
- h) The words 'Best before (month and year to be indicated)'; and
- j) Any other information required under the *Standards of Weights and Measures (Packaged Commodities) Rules, 1977, Prevention of Food Adulteration Rules, 1955 and Fruit Products Order, 1955.*

NOTE — In case juice is made from concentrate, the fact of reconstitution shall be declared as '.... Prepared/reconstituted from concentrates'.

8.2.2 Storage Instructions

Where Lemon juice requires to be kept under conditions of refrigeration, there shall be information for keeping and thawing of the product.

8.2.3 BIS Certification Marking

The product may also be marked with the Standard Mark.

8.2.3.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

8.2.4 ECO Mark

The product may also be marked with ECO Mark, the details of which may be obtained from the Bureau of Indian Standards.

requirements wherever applicable has to be complied with.

A-1.2 The product/packaging may display in brief the criteria based on which the product has been labelled as Environment Friendly.

minimize waste.

A-2 SPECIFIC REQUIREMENTS

A-2.1 The product shall conform to the requirements of quality prescribed under 4.

Bureau of Indian Standards

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This Indian Standard has been developed from Doc : No. FAD 10 (1198)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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